

Amendments to the Claims:

1. (currently amended) A catheter for use in a medical procedure, comprising:
 - a catheter body comprising an outer jacket, a first inner tube attached to the outer jacket, a second inner tube attached to the outer jacket, and wherein the first inner tube abuts the second inner tube;
 - a catheter tip operably connected to the catheter body;
 - ~~at least one~~ a first electrically conductive element integrally formed with the first inner tube ~~catheter body;~~
 - a second electrically conductive element integrally formed with the second inner tube; and
 - at least one energy delivery element operably connected to the ~~at least one~~ first electrically conductive element,
 - wherein the first electrically conductive element and the second electrically conductive element are operably connected.
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (currently amended) The catheter of ~~claim 5~~ claim 1, wherein the operable connection between the ~~at least one~~ first electrically conductive element and the second electrically conductive element is an electrical connection.
7. (currently amended) ~~The catheter of claim 4, further comprising:~~ A catheter for use in a medical procedure, comprising:
 - a catheter body comprising an outer jacket, a first inner tube attached to the outer jacket, a second inner tube attached to the outer jacket, and wherein the first inner tube abuts the second inner tube;
 - a catheter tip operably connected to the catheter body;

~~a first wherein the at least one~~ electrically conductive element ~~[[is]]~~ integrally
formed with the jacket;

a second electrically conductive element integrally formed with the first inner
tube;

at least one energy delivery element operably connected to the first
electrically conductive element; and

wherein the ~~at least one~~ first electrically conductive element and the second
electrically conductive element are operably connected.

8. (original) The catheter of claim 7, wherein the at least one energy delivery element is
integrally formed on the exterior of the jacket.

9. (original) The catheter of claim 7, wherein the energy delivery element comprises an
electrode flush with the surface of the tip.

10. (original) The catheter of claim 9, wherein the electrode encompasses the entirety of
an exterior surface of the tip.

11. (currently amended) A lead system for eliciting an electrical response from tissue,
comprising:

a lead body solid in lateral cross-section;

a lead tip operably connected to the lead body;

a first electrically conductive element integrally formed with the ~~catheter~~ lead
body;

a first energy delivery element operably connected to the ~~first one~~ first
electrically conductive element;

a second electrically conductive element integrally formed with the ~~catheter~~
lead body; and

a first electrical sensing element operably connected to the second electrically
conductive element.

12. (canceled)

13. (currently amended) A lead for eliciting an electrical response from tissue, comprising:

a lead body;

a lead tip operably connected to the lead body;

a first electrically conductive element integrally formed with the lead body;

a first energy delivery element operably connected to the first electrically
conductive element;

a second electrically conductive element integrally formed with the lead body;

a first electrical sensing element operably connected to the second electrically
conductive element; and

~~The lead of claim 11, further comprising a stylette; and~~

wherein the lead body further comprises a lumen, the lumen closed at a distal
end of the lead body; and

the stylette is disposed within the lumen.

14. (currently amended) The lead system of claim 11, further comprising:

a power source operably connected to the first electrically conductive
element, the power source operative to transmit electrical impulses along
the first electrically conductive element to the first energy delivery
element at timed intervals; and

a diagnostic apparatus operably connected to the second electrically
conductive element.

15. (currently amended) The lead system of claim 14, further comprising an adapter, the
adapter comprising:

a first adapter trace operably connecting the first electrically conductive
element and the power source; and

a second adapter trace operably connecting the second electrically
conductive element and the diagnostic apparatus.

16. (original) A multi-layer catheter for use in a medical procedure, comprising:

an outer jacket;

a first inner jacket nested within the outer jacket and extending along at least a portion of the outer jacket;

a second inner jacket nested within the first inner jacket and extending along at least a portion of the first inner jacket;

an outer tube nested within the outer jacket and abutting the first inner jacket;

an inner tube nested within the outer tube and abutting the second inner jacket;

a first electrically conductive trace extending along the outer jacket; and

a first electrode formed on an outer surface of the outer jacket, the first electrode operably connected to the first electrically conductive trace.

17. (original) The multi-layer catheter of claim 16, wherein:

a distal end of the first inner jacket and a distal end of the second inner jacket form a distal stair-step configuration in longitudinal cross-section; and

a proximal end of the first inner jacket and a proximal end of the second inner jacket form a stair-step configuration in longitudinal cross-section.

18. (original) The multi-layer catheter of claim 17, further comprising:

a second electrically conductive trace extending along the outer jacket; and

an electrical element formed on an outer surface of the outer jacket, the first electrode operably connected to the first electrically conductive trace.

19. (original) The multi-layer catheter of claim 18, further comprising:

an electrically nonconductive layer separating the first and second traces; and

wherein the first and second traces are longitudinally aligned.

20. (original) The multi-layer catheter of claim 18, wherein the electrical element is a thermistor.

21. (new) A tubular body for a catheter or lead, the body comprising a longitudinally extending proximal fragmentary trace in electrical communication with a longitudinally extending distal fragmentary trace.
22. (new) The tubular body of claim 21, wherein the fragmentary traces at least partially overlap.
23. (new) The tubular body of claim 21, further comprising an electrode in electrical communication with the distal fragmentary trace.
24. (new) The tubular body of claim 21, further comprising an adapter that includes the proximal fragmentary trace, which is adapted to electrically communicate with an electrical diagnostic or treatment apparatus.
25. (new) A catheter or lead comprising a tubular body portion and a conductive element co-extruded with the tubular body portion.
26. (new) The catheter or lead of claim 25, wherein the conductive element longitudinally extends along the tubular body portion.
27. (new) The catheter or lead of claim 25, further comprising an electrode operably coupled to a distal end of the catheter or lead and in electrical communication with the conductive element.
28. (new) The catheter or lead of claim 27, further comprising a thermocouple wire co-extruded with the tubular body portion.
29. (new) The catheter or lead of claim 28, wherein the thermocouple wire is in thermal communication with the electrode.
30. (new) The catheter or lead of claim 29, further comprising an electrically nonconductive layer separating the thermocouple wire from the electrode.
31. (new) A tubular body for a catheter or lead, the body comprising a longitudinally extending electrically nonconductive portion and a conductive element formed on the nonconductive portion via an electrodepositioning or sputtering process.
32. (new) The catheter or lead of claim 31, wherein the conductive element longitudinally extends along the nonconductive portion.

33. (new) The catheter or lead of claim 31, further comprising an electrode operably coupled to a distal end of the catheter or lead and in electrical communication with the conductive element.

34. (new) A catheter or lead comprising:

a tubular body portion comprising first and second concentric polymer layers;

a conductive element longitudinally extending between the concentric layers;

and

a heat generated bond between the concentric layers.

35. (new) The catheter or lead of claim 34, further comprising an electrode operably coupled to a distal end of the catheter or lead and in electrical communication with the conductive element.

36. (new) A catheter or lead comprising:

a tubular body portion comprising first and second concentric polymer layers;

a conductive element longitudinally extending between the concentric layers;

and

a sonic generated bond between the concentric layers.

37. (new) The catheter or lead of claim 36, further comprising an electrode operably coupled to a distal end of the catheter or lead and in electrical communication with the conductive element.

38. (new) A catheter or lead comprising:

a tubular body portion comprising first and second concentric polymer layers;

a conductive element longitudinally extending between the concentric layers;

and

a pressure generated bond between the concentric layers.

39. (new) The catheter or lead of claim 38, further comprising an electrode operably coupled to a distal end of the catheter or lead and in electrical communication with the conductive element.

40. (new) A method of manufacturing a tubular body for a catheter or lead, the method comprising providing a tubular polymer portion and forming a longitudinally extending trace on the polymer portion.
41. (new) The method of claim 40, wherein the trace is formed via an electrodepositing or sputtering process.
42. (new) The method of claim 40, further comprising forming a longitudinally extending groove in the tubular polymer portion and forming the trace in the groove.
43. (new) The method of claim 40, wherein the trace is formed via depositing an electrically conductive material on the polymer portion and removing excessive conductive material via abrasion, laser light, or chemical.
44. (new) A method of manufacturing a tubular body for a catheter or lead, the method comprising providing a tubular polymer portion, longitudinally extending a conductive element along an outer surface of the tubular polymer portion, and extruding an outer polymer layer over the tubular polymer portion.
45. (new) A catheter for use in a medical procedure, comprising:
- a catheter body comprising at least one polymeric layer;
 - a catheter tip operably connected to the catheter body;
 - at least one electrically conductive element integrally formed with the at least one polymeric layer; and
 - at least one energy delivery element operably connected to the at least one electrically conductive element.
46. (new) The catheter of claim 45, wherein the electrically conductive element is at least partially recessed in the at least one polymeric layer.
47. (new) The catheter of claim 45, wherein the electrically conductive element is a wire.
48. (new) The catheter of claim 45, wherein the electrically conductive element is a trace.
49. (new) A lead for eliciting an electrical response from tissue, comprising:
- a lead body comprising at least one polymeric layer;
 - a lead tip operably connected to the lead body;

a first electrically conductive element integrally formed with the at least one polymeric layer;

a first energy delivery element operably connected to the first one electrically conductive element;

a second electrically conductive element integrally formed with the catheter body; and

a first electrical sensing element operably connected to the second electrically conductive element.

50. (new) The catheter of claim 49, wherein the electrically conductive element is at least partially recessed in the at least one polymeric layer.

51. (new) The catheter of claim 49, wherein the electrically conductive element is a wire.

52. (new) The catheter of claim 49, wherein the electrically conductive element is a trace.